

the pressure differential between the cargo tank vapor space and the atmosphere does not exceed 28 kPa gauge (approx. 4 psig), or, for independent tanks, the maximum working pressure of the tank.

§ 153.360 Venting system restriction.

A venting system must have no assembly that could reduce its cross-sectional flow area or flow capacity to less than that required in § 153.358.

§ 153.361 Arrangements for removal of valves from venting systems having multiple relief valves.

A venting system having multiple relief valves may be arranged to allow the removal of a valve (for repair, as an example) provided the venting system:

- (a) Has valves that are interlocked, so that the removal of a valve does not reduce the venting system relieving capacity below the minimum relieving capacity required by § 153.358; and
- (b) Is arranged so that cargo vapor will not escape through the opening left after a valve has been removed.

[CGD 78-128, 47 FR 21208, May 17, 1982; 47 FR 27293, June 24, 1982]

§ 153.362 Venting system drain.

Unless a cargo vent system at every point is level or slopes back to the cargo tank under all conditions of heel and trim allowed under § 153.806, the cargo vent system must have a drain valve at each low point (trap) in the vent line.

§ 153.364 Venting system supports.

Supports for a vent system must meet § 38.10-10(c) of this chapter.

§ 153.365 Liquid overpressurization protection.

(a) Except as noted in paragraph (b) of this section, a containment system requiring closed or restricted gauging must:

- (1) Be designed to withstand the maximum pressure that develops during an overfill of the densest cargo endorsed for the containment system; or
- (2) Have an overflow control system that meets § 153.408; or
- (3) Meet the requirements specified by the Commandant (G-MSO).

(b) A containment system requiring restricted gauging, except for those cargoes that reference §§ 153.525 or 153.527, may be equipped with a spill valve that:

- (1) Meets ASTM F-1271; and
- (2) Limits the maximum pressure during liquid overfill at a specified cargo loading rate to that which the containment system is able to withstand (see §§ 153.294(b) and 152.977(b)).

[CGD 78-128, 47 FR 21208, May 17, 1982, as amended by CGD 82-063b, 48 FR 4782, Feb. 3, 1983; CGD 88-032, 56 FR 35827, July 29, 1991]

§ 153.368 Pressure-vacuum valves.

(a) The pressure side of a required pressure-vacuum relief valve must begin to open only at a pressure exceeding 3.5 kPa gauge (approx. 0.5 psig).

(b) A pressure-vacuum relief valve must meet the requirements of Subpart 162.017 of this chapter.

§ 153.370 Minimum relief valve setting for ambient temperature cargo tanks.

The relief valve setting for a containment system that carries a cargo at ambient temperature must at least equal the cargo's vapor pressure at 46 °C (approx. 115 °F).

[CGD 81-078, 50 FR 21173, May 22, 1985]

§ 153.371 Minimum relief valve setting for refrigerated cargo tanks.

The relief valve setting for a containment system that carries a refrigerated cargo must at least equal the lesser of:

- (a) That in § 153.370; or
- (b) 110 percent of the cargo's vapor pressure at the steady state temperature obtained by a full tank of cargo with the refrigeration system operating under ambient conditions described within the definition of a refrigerated tank in § 153.2.

§ 153.372 Gauges and vapor return for cargo vapor pressures exceeding 100 kPa (approx. 14.7 psia).

When table 1 references this section, the containment system must have a:

- (a) Tank pressure gauge at the point where cargo flow is controlled during transfer; and